Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_

HW#89: Use Algebra to Find Perimeter & Area

Geometry FORM A

Due Date: Tuesday, April 9th, 2013

**Failure to show all work (mark up all diagrams and write out needed formulas) and/or write in complete sentences will result in LaSalle.**

|  |  |
| --- | --- |
| 1) The **perimeter** of a rectangle is **80 inches**. The **length is 4 times as long as the width**. Find the **area** of the rectangle.  P = 2(l) + 2(w) **l = 4w**  **80** = 2(**4w**) + 2(w) | 2) Two of the sides of rectangle ABCE are **4 units longer** than the other two sides. If the **perimeter** of the rectangle ABCD **is 68 units**, what is the **area** of the rectangle?  P = 2(l) + 2(w) **l = 4 + w**  **68** = 2(l) + 2(w) |
| 3) A certain right triangle has a base of 4. Its height is 2 times the base. Suppose the height and the base are both **doubled**.  a. What is the area of the smaller triangle? A =  b. What is the area of the larger triangle? A =  c. How many times bigger is the larger triangle?  h = 2(4)  b = 4  **A = ½ b(h) A = ½ b(h)** | 4) A rectangle has an **area of 60 meters**, and a **width of 4 meters**. What is the **perimeter** of the rectangle?  1. Solve for ‘l’:  A = l(w)  **60** = l(4)  2. Find perimeter:  P = 2(l) + 2(w)  P = 2(l) + 2(4) |
| 5) The city of Oak Park is building a **semicircular** (1/2 a circle) field for their new park. They need to paint **around the field** (circumference). What is the distance around the field if the **diameter is 66 feet**?  C = πd ½ C = ½ πd | 6) A park wants to put a fence around a baseball field in the shape below (1/4 of Circumferencre). Each straight side of the fence is **100 feet long**, and the rounded side is an arc that measures 90. How many feet of fencing does the park need to purchase?  C = πd ¼ C = ¼ πd  Fencing = ¼ C + 100 + 100  100ft.  Exact\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Approximate\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 7)  1. Solve for d: 2. Solve for ‘r’: 3. Find Area:  C = πd 2r = d A = πr2  18π = πd | 8) The city of Aurora is building a **semicircular** (½ circle) field for their new park. They need to paint **around the field** (circumference). What is the distance around the field if the **radius is 56 feet**?  r = 56 C = πd ½ C = ½ πd  d = \_\_\_\_\_\_ |
| 9) What is the sine of  in the right triangle shown below?  *1. Use the Pythagorean Theorem to find*    *the hypotenuse*  4  *2. Use Soh Cah Toa to find the Sine of the*  *angle*  3 | 10) At a White Sox game, Mario watches a blimp from a distance of 300 yards. From Mario’s position, the blimp hovers at an angle of elevation of . A string is tossed from the blimp to Mario. Write a trigonometric function to find the length of the string. Soh Cah Toa  1. Label the sides: opp/hyp/adj  2. Choose the trig ratio that you will need to solve for ‘s’      300 yd  s  Mario |
| 11) If p=r-8 and 8=4p + 12m, which of the following expresses r in terms of m?  1. Substitute r – 8 for ‘p’ and plug into 8 = 4p + 12m  2. Solve for ‘r’ | 12) The area of the face of a cube (square faces) is 121 square centimeters. What is the volume of that cube?  *A = S2 V = l(w)(h)*  *1.* Find the length of the sides of the square face. Use *A = S2*  *2. Plug that value into V = l(w)(h)* for l, w, and h. |
| 13) Shawna is going to re-brick her house. There will be no space between the bricks; the bricks measure **2 inches wide by 6 inches long by 3 inches tall**. If her wall is a **rectangle** that measures **13 feet by 8 feet**, what is the minimum number of bricks needed to fully cover her wall?  1. Find the AREA of the wall  2. Find the AREA of the long face of the brick.  3. Divide the AREA of the wall by the area of the brick  3in.  2in.  6in. | 14) What are the solutions to the following:  ?  1. Isolate the x2  2. Use square roots to solve |
| 15) This will require a proportion!    24  6  18 | |
| 16) *This will require an algebraic expression!* ***One-time fee + monthly charge(# of months) = 100*** | |

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_

HW#90: Find A/P w/ New Dimensions of a New Figure

Geometry FORM A

Due Date: Wednesday, April 10th, 2013

**Failure to show all work (mark up all diagrams and write out needed formulas) and/or write in complete sentences will result in LaSalle.**

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| 1) The **perimeter** of a rectangle is **54 inches**. The **width is unknown**. The **length is two times longer than the width**. Find the area of the rectangle.  **P = 2(l) + 2(w) l = \_\_\_\_\_\_\_ w = \_\_\_\_\_\_\_**  A = l(w) | 2) The **perimeter** of a rectangle is **64 feet**. The **width** of the rectangle is **four less than half as long** *( ½ (l) –4)* **as its length**. Find the length and width of the rectangle.  **P = 2(l) + 2(w) l = l w = ½ (l) - 4** |
| 3) The **perimeter** of a rectangle is **108 inches**. The **length is 2 times as long as the width**. Find the area of the rectangle.  **P = 2(l) + 2(w) l = 2w w = \_\_\_\_\_\_\_**  A = l(w) | 4) In a right triangle ABC, the hypotenuse BC, has a length of 13 units and side AB has a length of 5. What is the **perimeter** of the triangle?  1. Label triangle.  2. Use Pythagorean Theorem to find missing side.  3. Add all sides to find perimeter. |
| 5) A **square** and a **semicircular** region have the **same perimeter**. If the **radius** of the semicircular region is **8 cm**, what is the **length of one side of the square**?  ½ C = ½ 2πr  r = 8    C = C = P P = 4s | 6) The hypotenuse of an isosceles right triangle has the same length as one side of a square. The **legs** of the isosceles right triangle are each **5 meters**. What is the area of the square? *Use the Pythagorean theorem to find the hypotenuse. Use the hypotenuse to find the square’s area.* |
| 7) A farmer who owned a **30-yard-by-60-yard** plot of land purchased more property such that the **area tripled** (times 3). The **30-yard length increased by 30 yards**. How much must the width have increased?  60 yd  4 ft  60 yd  30 yd  A = 3A =  Width increased \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 8) An **8-foot-by-4-foot** garden space is **increased by 3 times**. If the 8-foot side is **increased by 4 feet**, how many feet must the 4-foot **side** have been increased?  8 ft + 4 ft  8 ft  4 ft + x  A = 3A =  Width was 4 and is now \_\_\_\_\_\_\_\_. It increased by \_\_\_\_\_\_. |
| 9) What is the tan of  in the right triangle shown below?  3    4  Soh Cah Toa | 10) At a White Sox game, Mario watches a blimp from a distance. From Mario’s position, the blimp hovers at an angle of elevation of . The blimp has a vertical distance of 300 yards. A string is tossed from the blimp to Mario. Write a trigonometric function to find the length of the string.  Label sides, from 38 degrees, as Opp/Hyp/or Adj  Use Soh Cah Toa to find ‘s’  s  300 yd |
| 11) If p = r - 7 and 16 = 4p + 8m, which of the following expresses r in terms of m?   1. Plug r – 7 in for ‘p’ 2. Solve for ‘r’ | 12) The **area** of the **face of a cube** is **169** square centimeters. What is the volume of that cube?  ***Solve for ‘s’****:*  *A = s2*  *169 = s2*  ***Plug ‘s’ into formula for volume:***  *Volume = l(w)(h) All sides of cubes are equal* |
| 13) Shawna is going to re-brick her house. There will be no space between the bricks; the bricks measure **3 inches wide by 9 inches long by 3 inches tall.** If her wall is a rectangle that measures **14 feet by 12 feet**, what is the minimum number of bricks needed to fully cover her wall?  To find out how many of the bricks’ Areas will fit into the wall’s Area, DIVIDE the wall’s Area in inches by the bricks’ area….  A =length(width)  12 ft.  9 in.  14 ft.  Area in **feet** = length(width)  Area in **inches =** length(width)(12)  A= A in **inches** =  3 in. | |
| 14) What are the solutions to the following:    1. Isolate the x2  2. Use square roots to solve for ‘x’ | 15) |

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_

HW#91: Find A/P w/ New Dimensions of a New Figure

Geometry FORM A

Due Date: Thursday, April 11th, 2013

**Failure to show all work (mark up all diagrams and write out needed formulas) and/or write in complete sentences will result in LaSalle.**

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| --- | --- |
| 1) Find the **perimeter**, in yards, of the given figure.    Label EACH piece and then ADD: | 2) A farmer has a rectangular-shaped garden. It has a **length of 48 feet**, and a **perimeter of 132 feet**. What is the garden’s **area**?  **1. Solve for ‘w’ 2. Substitute ‘l’ and ‘w’ into:**  P = 2(l) + 2(w) A = l(w)  132 = 2(48) + 2(w) |
| 3) An amusement park wants to put a fence around a water park in the shape below. Each straight side of the fence is **100 feet long**, and the rounded side is an arc that measures 90. How many feet of fencing does the park need to purchase?  Curved Side is ¼ of the Circumference.  ¼ Circumference =    *Fencing = straight side + straight side + curved side*  Exact\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Approximate\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 4) The city of Oak Park is building a **semicircular** field for their new park. The need to paint **around** the field. What is the distance around the field if the **diameter is 66 feet**?  Semicircle = ½ circle  Circumference = πd  ½ Circumference = ½ πd  *Distance around = semicircle circumference + diameter*  Exact\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Approximate\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 5) Two of the sides of **rectangle** ABCE are **12 units longer** than the other two sides. If the **perimeter** of the rectangle ABCE is **72 units**, what is the area of the rectangle  **Perimeter =**  *P = 72*  *Width =*  *Length =*  **Area =** | 6) In a **right triangle** ABC, the **hypotenuse BC**, has a length of **13 units** and side **AB has a length of 5**. What is the perimeter of the triangle?  *Use Pythagorean Theorem to find missing side.*  B  C  A |
| 7) An **8-foot-by-4-foot** garden space is increased by **3 times**. If the **8-foot side is increased by 4 feet**, how many feet must the 4-foot side have been increased?  8 + 4 ft.  8ft.  4 + x ft.  4ft.  A = 3A = | 8) A **square** and a **semicircular** region have the **same perimeter**. If the length of the **radius** of the semicircular region is **16,** what is the length of one side of the square?  P = 4s ½ C = ½ (2πr)  P = r + r + ½ (2πr)  4s = r + r + ½ (2πr) |
| 9) What is the **tangent** of  in the right triangle shown below? Soh Cah Toa    8    15 | 10) At a White Sox game, Mario watches a blimp from a distance. From Mario’s position, the blimp hovers at an angle of elevation of . The blimp has a vertical distance of 120 yards. A string is tossed from the blimp to Mario. Write a trigonometric function to find the length of the string.    s    120 yd |
| 11) If p=r+3 and 24=2p + 8m, which of the following expresses r in terms of m?  1. Solve for ‘p’  2. Substitute the value for ‘p’ into p = r + 3, and solve for ‘r’ | 12) The **area of the face of a cube** is **49** square centimeters. What is the volume of that cube?  A = s2 V = l(w)(h) |
| 13) Shawna is going to re-brick her house. There will be no space between the bricks; the bricks measure 2 inches wide by **10 inches** long by **5 inches tall**. If her wall is a rectangle that measures **13 feet by 11 feet**, what is the minimum number of bricks needed to fully cover her wall?  wall  A = A (in ft) =  brick  A (in in.) =\_\_\_\_\_\_\_\_ x 12 =  How many bricks can fit in the wall? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 14) What are the solutions to the following: ?   1. isolate the x2, writing ‘y’ as 0 2. use square roots to solve for ‘x’ |
|  |  |